

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563896

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-4LO-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8352.0 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

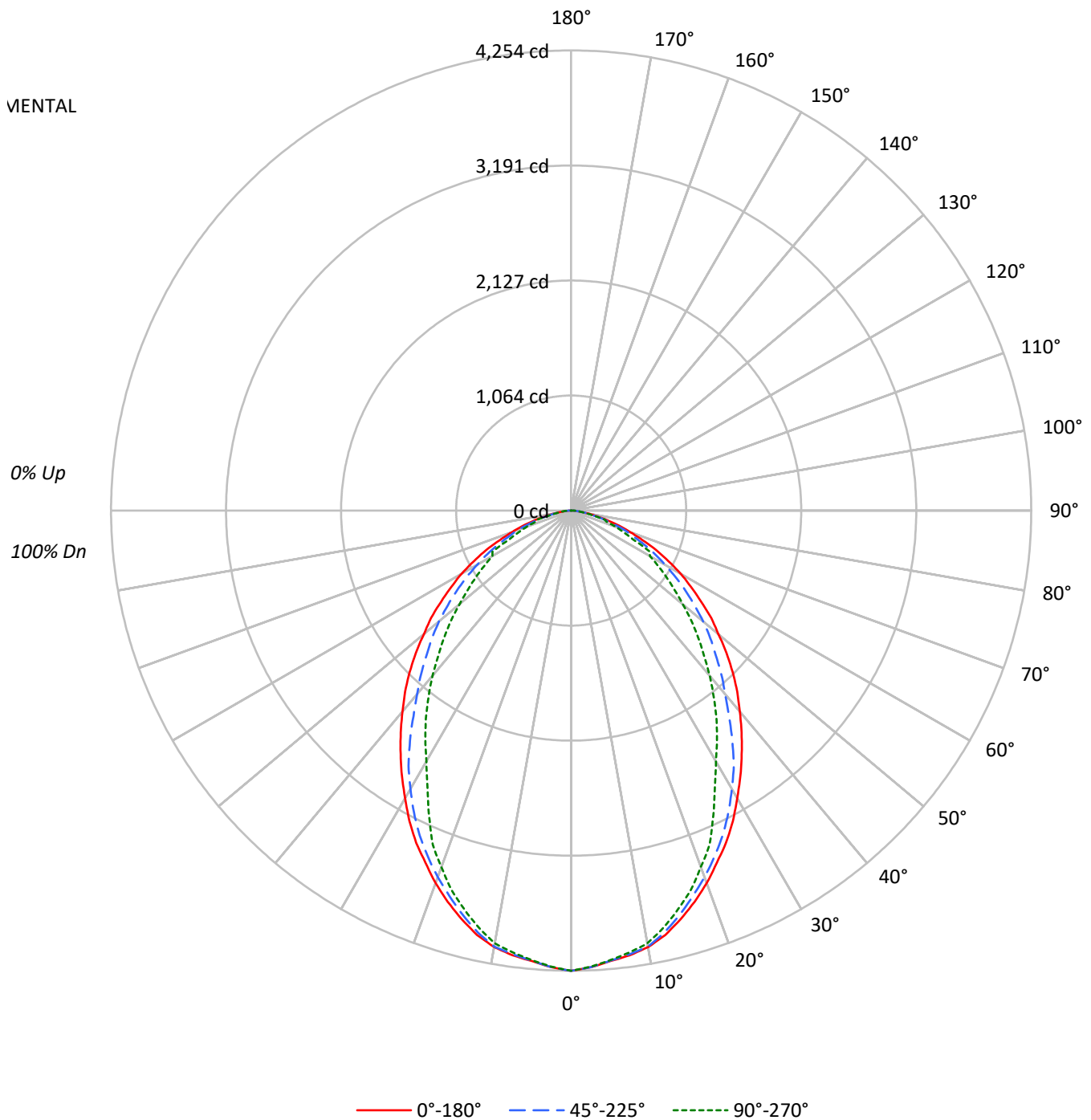
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5724	5724	5724
5°	5646	5640	5633
10°	5598	5591	5551
15°	5447	5392	5316
20°	5247	5162	5021
25°	5031	4921	4615
30°	4768	4615	4157
35°	4516	4266	3845
40°	4259	3887	3499
45°	4015	3594	3163
50°	3716	3336	2821
55°	3438	3023	2527
60°	3150	2700	2263
65°	2772	2365	2004
70°	2283	2070	1703
75°	1815	1585	1662
80°	1220	1144	1067
85°	760	911	1064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4015 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.0	4.7
10°-20°	1086.9	13.0
20°-30°	1504.7	18.0
30°-40°	1604.4	19.2
40°-50°	1463.7	17.5
50°-60°	1146.7	13.7
60°-70°	747.4	8.9
70°-80°	331.1	4.0
80°-90°	71.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2987.6	35.8
0°-40°	4592.0	55.0
0°-60°	7202.4	86.2
0°-90°	8352.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8352.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4254	4254	4254	4254	4254	
5°	4181	4176	4176	4171	4171	397
15°	3910	3910	3871	3831	3817	1099
25°	3389	3369	3315	3197	3108	1556
35°	2749	2730	2597	2400	2341	1719
45°	2110	2066	1889	1731	1662	1625
55°	1466	1421	1289	1136	1077	1315
65°	871	821	743	757	630	858
75°	349	325	305	290	320	374
85°	49	54	59	64	69	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4254.4	4254.4	4254.4	4254.4	4254.4
2.5°	4224.9	4224.9	4224.9	4220.0	4220.0
5°	4180.6	4175.7	4175.7	4170.8	4170.8
7.5°	4146.2	4141.3	4136.4	4131.4	4121.6
10°	4097.0	4097.0	4092.1	4067.5	4062.6
12.5°	4018.3	4013.4	3993.7	3959.3	3949.5
15°	3910.1	3910.1	3870.8	3831.4	3816.7
17.5°	3792.1	3787.2	3738.0	3698.6	3678.9
20°	3664.2	3654.4	3605.2	3541.2	3506.8
22.5°	3521.6	3521.6	3462.5	3378.9	3344.5
25°	3388.8	3369.1	3315.0	3196.9	3108.4
27.5°	3236.3	3206.8	3147.8	2980.5	2877.3
30°	3069.1	3054.3	2970.7	2754.3	2675.6
32.5°	2911.7	2887.1	2798.6	2572.3	2508.4
35°	2749.4	2729.7	2596.9	2400.2	2341.1
37.5°	2587.1	2562.5	2395.3	2237.9	2164.1
40°	2424.8	2395.3	2213.3	2070.6	1991.9
42.5°	2272.3	2232.9	2055.9	1903.4	1814.9
45°	2110.0	2065.7	1888.7	1731.3	1662.4
47.5°	1947.7	1908.3	1746.0	1583.7	1505.0
50°	1775.5	1741.1	1593.6	1431.2	1347.6
52.5°	1632.9	1578.8	1436.2	1273.9	1205.0
55°	1465.7	1421.4	1288.6	1136.1	1077.1
57.5°	1313.2	1268.9	1146.0	1003.3	954.2
60°	1170.6	1106.6	1003.3	880.4	841.0
62.5°	1013.2	964.0	875.5	772.2	821.4
65°	870.6	821.4	742.7	757.4	629.6
67.5°	713.2	688.6	619.7	550.9	531.2
70°	580.4	550.9	526.3	452.5	432.8
72.5°	462.3	432.8	398.4	359.0	344.3
75°	349.2	324.6	304.9	290.2	319.7
77.5°	241.0	231.2	216.4	201.7	196.7
80°	157.4	152.5	147.6	142.6	137.7
82.5°	93.4	93.4	93.4	93.4	93.4
85°	49.2	54.1	59.0	63.9	68.9
87.5°	29.5	29.5	34.4	39.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)